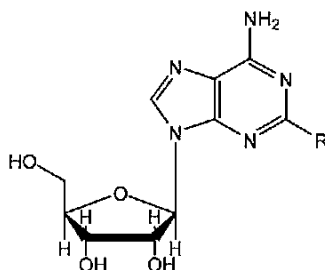


## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

### Listing of Claims:

1. (original) A method of synthesising a 2-substituted adenosine of formula I, which comprises converting 2-nitro-pentabenzoyl adenosine to the 2-substituted adenosine:

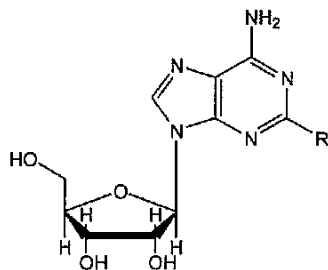


I

- wherein R = C<sub>1-6</sub> alkoxy (straight or branched), a phenoxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), a benzyloxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), or a benzoyl group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy).
2. (original) A method according to claim 1, wherein R = methoxy, ethoxy, propoxy, butoxy, pentyloxy, hexyloxy, phenoxy, benzyloxy, or benzoyl.
  3. (currently amended) A method according to claim 1, wherein 2-nitro-pentabenzoyl adenosine is converted to the 2-substituted adenosine by a process comprising reacting deprotection, and reaction with C<sub>1-6</sub> alkoxide anion, or a phenoxide anion and deprotecting protected functional groups.

4. (original) A method according to claim 3, wherein the anion is methoxide anion produced from MeOH/NaOMe, MeOH/n-BuLi, MeOH/NaOH, MeOH/NaH, or MeOH/KO<sup>t</sup>Bu.
5. (previously presented) A method according to claim 1, which further comprises converting pentabenzoyl adenosine to 2-nitro-pentabenzoyl adenosine.
6. (original) A method of synthesising 2-nitro-pentabenzoyl adenosine which comprises converting pentabenzoyl adenosine to 2-nitro-pentabenzoyl adenosine.
7. (currently amended) A method according to claim 5, wherein pentabenzoyl adenosine is converted to 2-nitro-pentabenzoyl adenosine by nitrating pentabenzoyl adenosine by a process comprising reacting the pentabenzoyl adenosine with ~~using~~ tetrabutylammonium nitrate (TBAN), or tetramethylammonium nitrate (TMAN) as a nitrating reagent.
8. (currently amended) A method according to claim 7, which further comprises reducing the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate ~~TMAN~~ contaminating the 2-nitro-pentabenzoyl adenosine after the nitration reaction.
9. (currently amended) A method according to claim 8, wherein reducing the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate ~~TMAN is reduced~~ by is performed by a process comprising washing the 2-nitro-pentabenzoyl adenosine with water.
10. (currently amended) A method according to claim 9, which further comprises recrystallising the 2-nitro-pentabenzoyl adenosine after the washing with water.
11. (previously presented) A method according to claim 5, which further comprises converting adenosine to pentabenzoyl adenosine.
12. (original) A method of synthesising pentabenzoyl adenosine or 2-nitro-pentabenzoyl adenosine which comprises converting adenosine to pentabenzoyl adenosine.

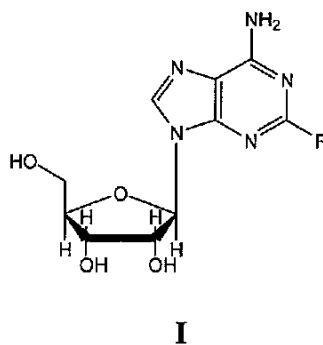
13. (currently amended) A method according claim 11, wherein the conversion of adenosine to pentabenzoyl adenosine comprises reacting adenosine with benzoyl chloride~~is benzoylated using benzoyl chloride.~~
14. (original) 2-nitro pentabenzoyl adenosine.
- 15-17. (cancelled)
18. (currently amended) A method of reducing the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN contaminating 2-nitro-pentabenzoyl adenosine formed by nitration of pentabenzoyl adenosine with tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN, which comprises washing the 2-nitro-pentabenzoyl adenosine with water.
19. (currently amended) A method according to claim 18 which further comprises recrystallising the 2-nitro-pentabenzoyl adenosine ~~2-nitro-pentabenzoyl-adenosine~~ after washing with water.
20. (currently amended) A method of synthesising a 2-substituted adenosine of formula I, which comprises: nitrating adenosine pentaacetate using by a process comprising reacting adenosine pentaacetate with tetrabutylammonium nitrate (TBAN) or tetramethylammonium nitrate (TMAN) to produce 2-nitroadenosine pentaacetate; reducing the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN contaminating the resulting 2-nitroadenosine pentaacetate; and then producing from the 2-nitroadenosine pentaacetate the 2-substituted adenosine ~~from the 2-nitroadenosine pentaacetate according to formula I:~~



I

- wherein R = C<sub>1-6</sub> alkoxy (straight or branched), a phenoxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), a benzyloxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), or a benzoyl group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy).
21. (currently amended) A method according to claim 20, wherein the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN contaminant is reduced by triturating the 2-nitroadenosine pentaacetate with isopropanol and washing the triturated 2-nitroadenosine pentaacetate with water.
22. (currently amended) A method according to claim 20, wherein the 2-substituted adenosine is produced from the 2-nitroadenosine pentaacetate by a process comprising deprotecting the 2-nitroadenosine pentaacetate and reaction reacting with a C<sub>1-6</sub> alkoxide anion or a phenoxide anion.
23. (currently amended) A method according to claim 20, wherein the 2-substituted adenosine is 2-methoxyadenosine 2-methoxyadenosine, and the 2-methoxyadenosine this is produced from the 2-nitroadenosine pentaacetate by reaction reacting the 2-nitroadenosine pentaacetate with methoxide anion from methanol/NaOMe, methanol/n-BuLi, methanol/NaOH, methanol/NaH, or methanol/KO<sup>t</sup>Bu.
24. (previously presented) A method according to claim 20, which further comprises synthesising the adenosine pentaacetate by acylating adenosine.

25. (currently amended) A method according to claim 24, wherein the adenosine is acylated to form an O-tri-acetyl and/or tetra-acetyl derivative of adenosine, the derivative(s) is isolated, and the isolated derivative(s) is further acylated to produce adenosine pentaacetate.
26. (previously presented) A method according to claim 24, which further comprises washing the adenosine pentaacetate to remove contaminating adenosine tetraacetate before nitrating the washed adenosine pentaacetate to form the 2-nitroadenosine pentaacetate.
27. (currently amended) A method of synthesising a 2-substituted adenosine of formula I,



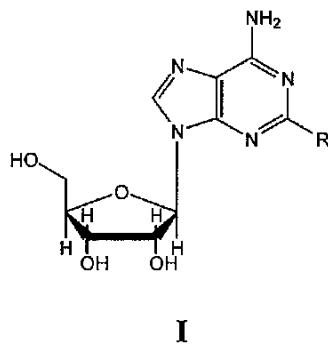
wherein R = C<sub>1-6</sub> alkoxy (straight or branched), a phenoxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), a benzyloxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), or a benzoyl group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy);

which wherein the method comprises acylating adenosine to form an O-tri-acetyl and/or tetra-acetyl derivative of adenosine, isolating the derivative(s), further acylating the isolated derivative(s) to produce adenosine pentaacetate, and producing the 2-substituted adenosine from the adenosine pentaacetate.

28. (currently amended) A method according to claim 27 which further comprises washing the adenosine pentaacetate to reduce the amount of contaminating adenosine tetraacetate

before producing the 2-substituted adenosine of formula I from the washed adenosine pentaacetate.

29. (currently amended) A method of synthesising a 2-substituted adenosine of formula I,

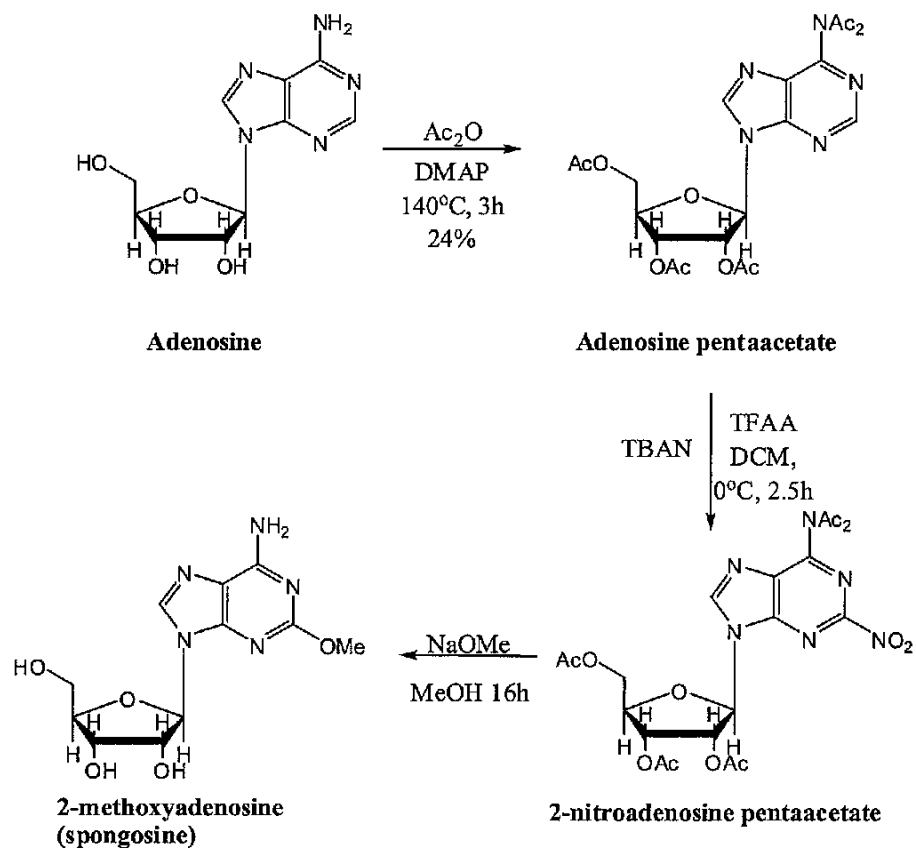


wherein R = C<sub>1-6</sub> alkoxy (straight or branched), a phenoxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), a benzyloxy group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy), or a benzoyl group (unsubstituted, or mono-, or di-substituted by halo, amino, CF<sub>3</sub>-, cyano, nitro, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy);

~~which~~ wherein the method comprises acylating adenosine, or an acylated derivative of adenosine, to form adenosine pentaacetate, washing the adenosine pentaacetate to reduce the amount of contaminating adenosine tetraacetate, and producing the 2-substituted adenosine of formula I from the washed adenosine pentaacetate.

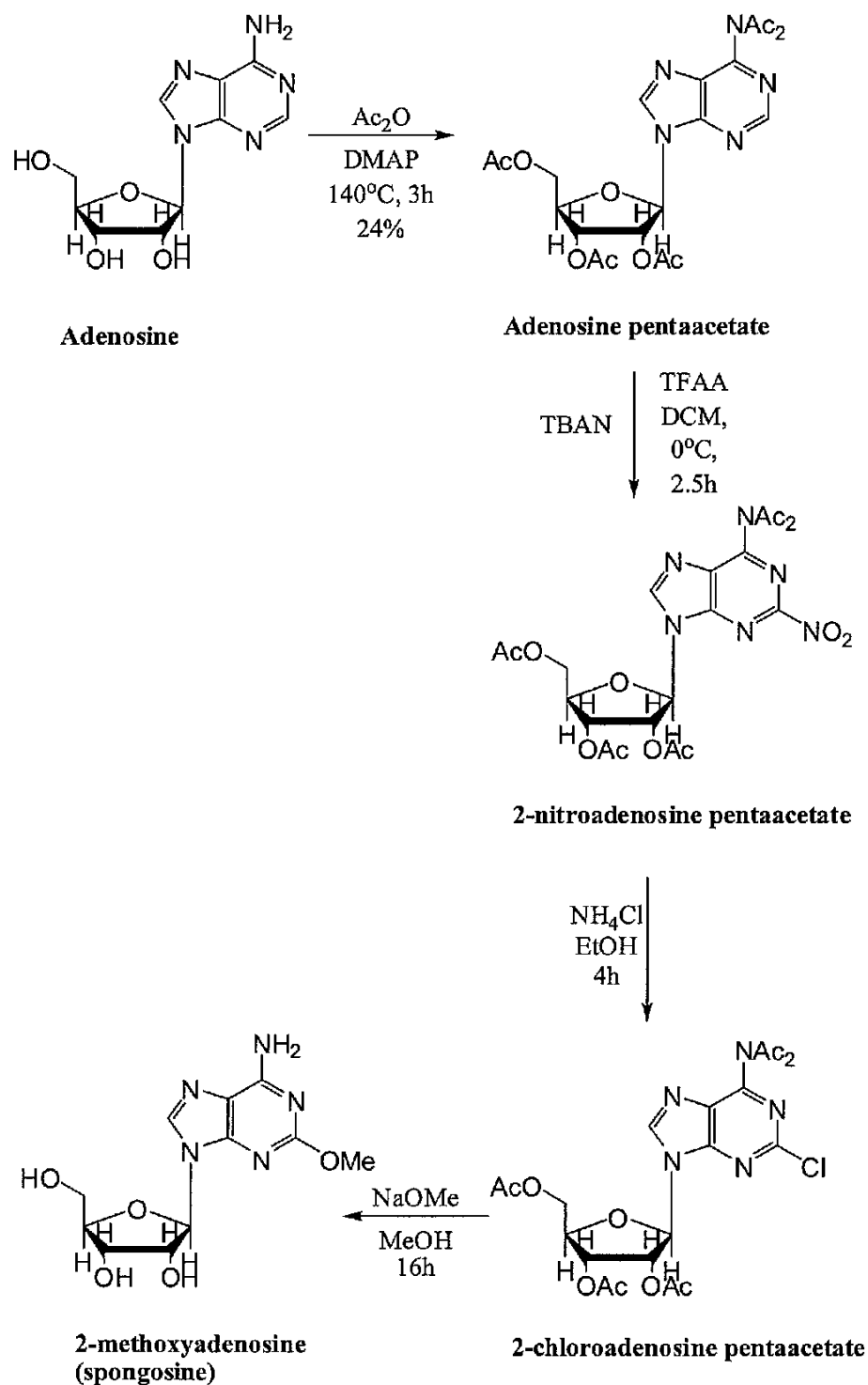
30. (currently amended) A method according to claim 27, which further comprises nitrating the adenosine pentaacetate to produce 2-nitroadenosine pentaacetate, and producing the 2-substituted adenosine of formula I from the 2-nitroadenosine pentaacetate.
31. (currently amended) A method according to claim 30, wherein the 2-substituted adenosine is 2-methoxyadenosine, and the 2-methoxyadenosine is produced by reacting methoxide anion from methanol/NaOMe, methanol/n-BuLi, methanol/NaOH, methanol/NaH, or methanol/KO<sup>t</sup>Bu with the 2-nitroadenosine pentaacetate.

32. (previously presented) A method according to claim 20, which further comprises converting 2-nitroadenosine pentaacetate to 2-chloroadenosine pentaacetate before producing the 2-substituted adenosine from the 2-chloroadenosine pentaacetate.
33. (original) A method of synthesising a 2-substituted adenosine, which comprises converting 2-chloroadenosine pentaacetate to the 2-substituted adenosine.
34. (original) A method according to claim 33, which further comprises producing the 2-chloroadenosine pentaacetate from 2-nitroadenosine pentaacetate.
35. (previously presented) A method according to claim 32, wherein the 2-substituted adenosine is 2-methoxyadenosine, and the 2-chloroadenosine pentaacetate is converted to 2-methoxyadenosine by reaction with methoxide anion from methanol/NaOMe, methanol/n-BuLi, methanol/NaOH, or methanol/NaH with the 2-nitroadenosine pentaacetate.
36. (cancelled)
37. (original) A method of synthesising 2-methoxyadenosine, which comprises reacting methoxide anion from methanol/NaOMe, methanol/n-BuLi, methanol/NaOH, methanol/NaH, or methanol/KO<sup>t</sup>Bu with 2-nitroadenosine pentaacetate.
38. (currently amended) A method of synthesising 2-methoxyadenosine, which comprises the steps shown in scheme 1 or 2;



**Scheme 1**





**Scheme 2.**

40. (original) 2-methoxyadenosine which is >96% pure.
41. (currently amended) A method of synthesising 2-nitroadenosine pentaacetate, which comprises nitrating adenosine pentaacetate ~~using~~ by reaction with tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN to produce 2-nitroadenosine pentaacetate, and reducing the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN contaminating the 2-nitroadenosine pentaacetate.
42. (currently amended) A method according to claim 41, wherein the amount of tetrabutylammonium nitrate TBAN or tetramethylammonium nitrate TMAN contaminant is reduced by triturating the 2-nitroadenosine pentaacetate with isopropanol and washing the triturated 2-nitroadenosine pentaacetate with water.
43. (currently amended) A method of synthesising adenosine pentaacetate, ~~2-nitroadenosine pentaacetate, or a 2-substituted adenosine of formula I, which includes the~~ comprising following steps: acylating adenosine to form an O-tri-acetyl and/or tetra-acetyl derivative of adenosine, isolating the derivative(s), and further acylating the isolated derivative(s) to produce adenosine pentaacetate.
44. (currently amended) A method of synthesising adenosine pentaacetate, ~~2-nitroadenosine pentaacetate, or a 2-substituted adenosine of formula I, which includes~~ comprising the following steps: acylating adenosine or an acylated derivative of adenosine to form adenosine pentaacetate; and washing the adenosine pentaacetate to reduce the amount of contaminating adenosine tetraacetate.